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A Study of Polycyclic Aromatic Hydrocarbons (PAHs) in the Urban Environment of Delhi

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Abstract—*This paper reports on polycyclic aromatic hydrocarbons (PAHs) in the atmospheric particulate matter of Daryaganj, an urbanized site of New Delhi, India. Suspended particulate matter samples of 24 hour duration were collected on glass fiber filter paper on first day of the week in each month during January 2010 to December 2010. PAHs were extracted from filter papers using toluene with ultrasonication method and analysed. Quantitative measurements of polycyclic aromatic hydrocarbons (PAHs) were carried out using the Gas Chromatography technique. The seasonal average concentrations were found to be maximum in winter and minimum during in the monsoon. The results of Principal Component Analysis (PCA) indicate that diesel and gasoline driven vehicles are the Principal sources of PAHs in all the seasons. In winter coal and wood combustion also significantly contribute to the PAH levels.*